

DYNAMIC OPTICAL SPECTRAL CONTROL SCHEME  
FOR OPTICAL AMPLIFIER SITES

ABSTRACT OF THE DISCLOSURE

A method for dynamically compensating for signal loss and dispersion in an optical signal traversing through an optical network. The method includes providing a dynamic gain equalization filter (DGEQ) having a dynamically adjustable transfer function, and providing a first optical amplifier and a second optical amplifier interconnected by the DGEQ to form a dynamic amplifier site in the optical network. The method further includes controlling spectral power profile of the optical signal at an output of the dynamic amplifier site by dynamically adjusting a transfer function associated with the DGEQ.